



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208
T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/economy

CGI Windows & Doors

10100 NW 25th Street

Miami, FL 33172

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series "450" Clipped, Extruded Aluminum Tube Mullion - L.M.I.

APPROVAL DOCUMENT: Drawing No. **M98-02**, titled "Series '450' Aluminum Clipped Tube Mullion", sheets 1 through 5 of 5, dated 04/23/98, with revision H dated 05/19/16, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises and renews** NOA# **14-1103.10** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Jorge M. Plasencia, P.E.**



P 7/11/2016

NOA No. 16-0523.01
Expiration Date: October 05, 2021
Approval Date: July 21, 2016
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **M98-02**, titled "Series '450' Aluminum Clipped Tube Mullion", sheets 1 through 5 of 5, dated 04/23/98, with revision H dated 05/19/16, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.

B. TESTS

1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per FBC 2411.3.2.1, and TAS 202-94
along with marked-up drawings and installation diagram of an aluminum tube mullion, prepared by Hurricane Test Laboratory, LLC, Test Report No. **HTL-0080-0304-11**, dated 08/03/11, signed and sealed by Vinu J. Abraham, P.E.
(Submitted under previous NOA No.11-0831.05)
2. Test reports on: 1) Air Infiltration Test, per SFBC, PA 202-94
2) Uniform Static Air Pressure Test, Loading per SFBC, PA 202-94
3) Water Resistance Test, per SFBC, PA 202-94
4) Large Missile Impact Test per SFBC, PA 201-94
5) Cyclic Wind Pressure Loading per SFBC, PA 203-94
6) Forced Entry Test, per SFBC 3603.2 (b), and PA 202-94
along with marked-up drawings of aluminum in/out swing door w/sidelites, by Hurricane Testing Laboratory, Inc., Test Report No. **HTL-0080-912-97**, dated 09/23/97 thru 02/27/98 for specimen No. 1, 2, 3 and 4 tested per PA 202-94, specimen No. 4, 5A, 5B and 5C tested per PA 201-94 & PA 203-94, signed and sealed by Timothy S. Marshall, P.E.
(Submitted under NOA No.98-0608.22)
3. Test reports on: 1) Tensile Test, per SFBC and per ASTM E 8-89
2) Spectrographic Analysis Loading Test, per SFBC and per ASTM E 415-95
along with marked-up drawings and installation diagram of cold roll aluminum, prepared by Metallurgical, Inc., Test Report No. **MI-8CM-709**, dated 04/02/98 and 10/02/98, both signed and sealed by Frank Grate, P.E.
(Submitted under NOA No. 98-0608.22)



Jorge M. Plasencia, P.E.
Product Control Unit Supervisor
NOA No. 16-0523.01
Expiration Date: October 05, 2021
Approval Date: July 21, 2016

CGI Windows & Doors

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC-5th Edition (2014)**, dated 10/04/14, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
(Submitted under previous NOA No. 14-1103.10)

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

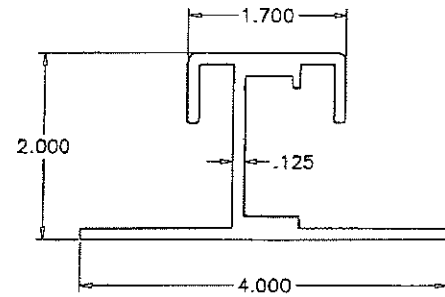
1. Statement letter of conformance, complying with **FBC-5th Edition (2014)**, and of no financial interest, dated October 4, 2014, issued by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
(Submitted under previous NOA No. 14-1103.10)
2. Laboratory compliance letter for Test Report No. **HTL-0080-0304-11**, issued by Hurricane Test Laboratory, LLC, dated 08/03/11, signed and sealed by Vinu J. Abraham, P.E.
(Submitted under previous NOA No. 11-0831.05)
3. Laboratory compliance letter for Test Report No. **HTL-0080-912-97**, issued by Hurricane Test Laboratory, LLC, dated 02/27/98, signed and sealed by Timothy S. Marshall, P.E.
(Submitted under NOA No. 98-0608.22)
4. Proposal No. **10-0940** issued by Product Control, dated 11/17/00, signed by Ishaq I. Chanda, P.E.
(Submitted under NOA No. 98-0608.22)

G. OTHERS

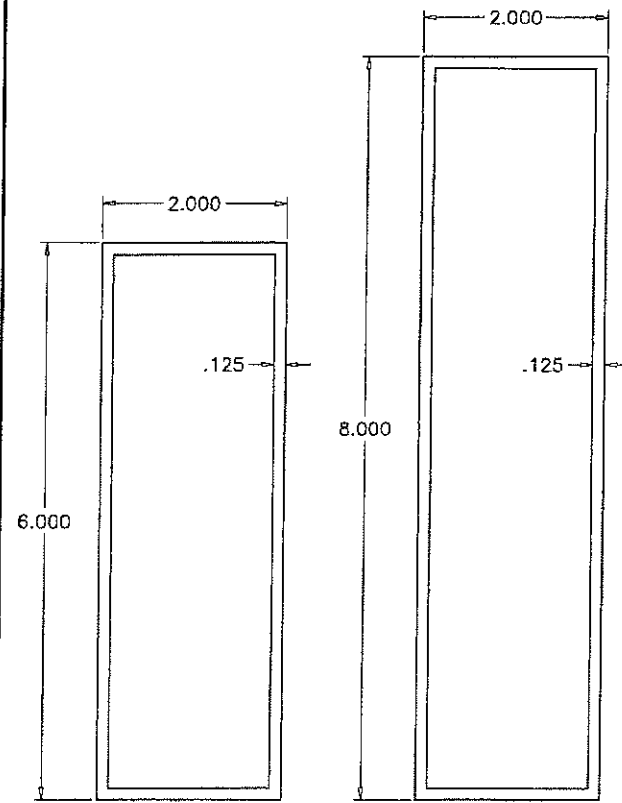
1. Notice of Acceptance No. **14-1103.10** issued to CGI Windows & Doors for their Series "450" Aluminum Tube Mullion - L.M.I. approved on 03/05/16 and expiring on 10/05/16.



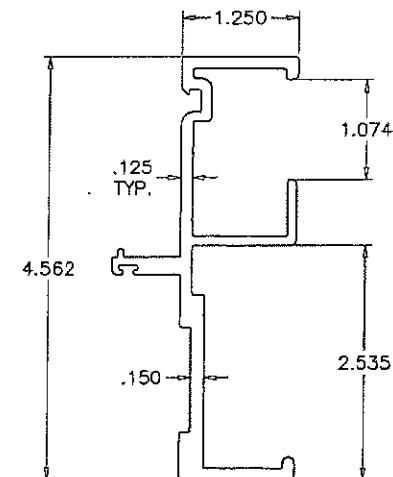
Jorge M. Plasencia, P.E.
Product Control Unit Supervisor
NOA No. 16-0523.01
Expiration Date: October 05, 2021
Approval Date: July 21, 2016



MULLION CLIP
CGI-395
6063-T6



MULLION TUBES
6063-T6



DOOR JAMB
CGI-509
6063-T6

INSTRUCTIONS:

USE CHARTS AS FOLLOWS.

- STEP 1** DETERMINE DESIGN LOAD REQUIRED PER ASCE 7 FOR PARTICULAR OPENING.
- STEP 2** USE CONNECTION TO MULLION AS PER THIS PRODUCT APPROVAL.
- STEP 3** USING CHART SELECT MULLIONS WITH DESIGN RATING MORE THAN THE DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 4** CAPACITY OF SELECTED CGI'S DOORS/SIDELITE/TRANSOM AND MULLION MUST EQUAL OR EXCEED REQUIRED LOADS.

THESE MULLIONS ARE RATED FOR LARGE & SMALL MISSILE IMPACT

SERIES '450' VERTICAL ALUMINUM TUBE MULLION DOOR FRAME MEMBER INCLUDED IN PROPERTIES

NOTES:

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2014 (5TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

ALL GLAZING PRODUCTS USED WITH THESE MULLIONS MUST MEET THE APPLICABLE BUILDING CODE REQUIREMENTS I.E: WIND LOAD, WATER INFILTRATION, FORCED ENTRY RESISTANCE, SAFEGUARDS ETC.

WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.

ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS, EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL COVERING (STUCCO, TILE ETC.).

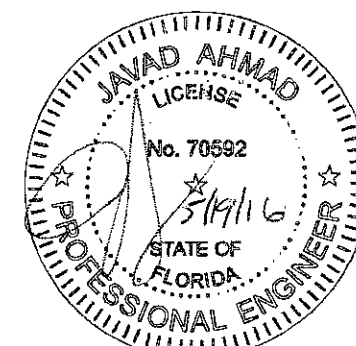
ANCHORING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2014 FLORIDA BUILDING CODE & ADOPTED STANDARDS.

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **16-0523.01**

Expiration Date **10/05/2021**

By 
Miami-Pade Product Control



THIS MULLION APPROVAL TO BE USED FOR MULLION AS SHOWN ON SHEET 5 AND MUST CONTAIN CGI'S SWING DOORS, SIDELITES AND TRANSOMS AS DEPICTED.

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL (305) 264-8100 FAX (305) 262-6978

SERIES '450' ALUMINUM CLIPPED TUBE MULLION
CGI Windows and Doors, Inc.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL (305) 593-6590 FAX (305) 593-6592

revisions:	no.	date	by	description
	D	07.09.09		UPDATED FOR 2007 FBC
	E	08.18.11		GENERAL REVISION
	F	09.22.11		REV. PER BNC COMMENTS
	G	10.06.14		UPDATED TO 2014 FBC
	H	05.19.16		EDITORIAL CHANGES

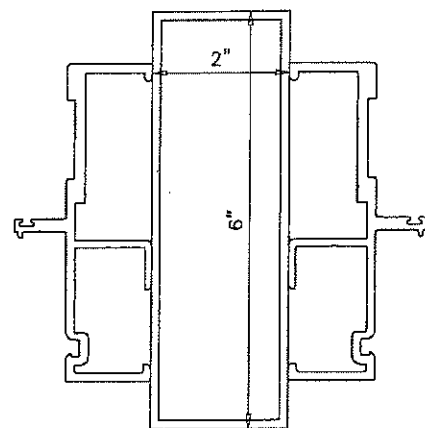
date: 04-23-98
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
M98-02

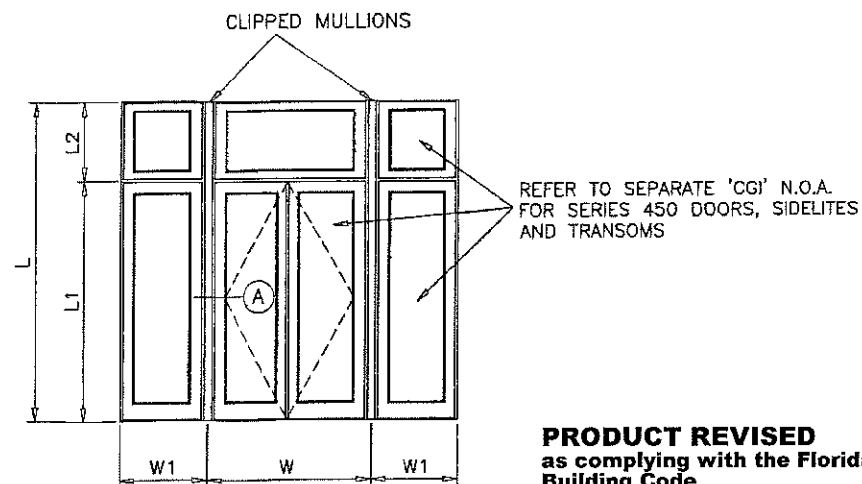
sheet 1 of 5

DESIGN LOAD CAPACITY - PSF (2 X 6 X 1/8")																										
OPENING DIMENSIONS			1/4" DIA. ULTRACON												5/16" DIA. ULTRACON											
			DOOR WIDTH (W) = 60"				DOOR WIDTH (W) = 72"				DOOR WIDTH (W) = 84"				DOOR WIDTH (W) = 60"				DOOR WIDTH (W) = 72"				DOOR WIDTH (W) = 84"			
			SIDELITE WIDTHS (W1)				SIDELITE WIDTHS (W1)				SIDELITE WIDTHS (W1)				SIDELITE WIDTHS (W1)				SIDELITE WIDTHS (W1)				SIDELITE WIDTHS (W1)			
L	L1	L2	24"	30"	36"	42"	24"	30"	36"	42"	24"	30"	36"	42"	24"	30"	36"	42"	24"	30"	36"	42"	24"	30"	36"	42"
96"	84"	12"	110.0	110.0	110.0	108.7	110.0	109.5	103.2	97.5	103.9	98.2	93.1	88.4	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0
102"	84"	18"	110.0	110.0	110.0	103.9	110.0	105.1	98.9	93.4	99.9	94.3	89.3	84.8	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0
108"	84"	24"	110.0	110.0	106.3	99.6	107.9	101.0	94.9	89.6	96.2	90.7	85.8	81.4	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	106.2	102.2
114"	84"	30"	110.0	109.5	102.1	95.6	103.9	97.2	91.3	86.0	92.8	87.4	82.6	78.2	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	107.8	102.2
120"	84"	36"	110.0	105.5	98.2	91.9	100.3	93.7	87.9	82.8	89.6	84.3	79.6	75.3	110.0	110.0	110.0	110.0	110.0	110.0	106.3	100.0	108.8	102.2	96.4	91.1
126"	84"	42"	110.0	101.7	94.6	88.4	96.9	90.4	84.8	79.8	86.6	81.4	76.8	72.7	110.0	108.2	100.7	94.2	103.0	96.2	90.2	84.9	92.0	86.6	81.7	77.3
132"	84"	48"	100.2	92.9	86.5	81.0	88.2	82.4	77.4	72.9	78.8	74.1	70.0	66.3	100.2	92.9	86.5	81.0	88.2	82.4	77.4	72.9	78.8	74.1	70.0	66.3
138"	84"	54"	86.7	80.4	75.0	70.2	76.3	71.4	67.0	63.2	68.1	64.1	60.6	57.5	86.7	80.4	75.0	70.2	76.3	71.4	67.0	63.2	68.1	64.1	60.6	57.5
144"	84"	60"	75.7	70.3	65.5	61.4	66.6	62.3	58.6	55.2	59.4	56.0	52.9	50.2	75.7	70.3	65.5	61.4	66.6	62.3	58.6	55.2	59.4	56.0	52.9	50.2
108"	96"	12"	110.0	109.5	102.4	96.2	103.2	96.9	91.3	86.3	91.9	86.8	82.3	78.2	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	107.5	102.2
114"	96"	18"	110.0	105.5	98.5	92.5	99.6	93.4	87.9	83.0	88.7	83.8	79.3	75.3	110.0	110.0	110.0	110.0	110.0	110.0	110.0	108.4	110.0	109.4	103.6	98.4
120"	96"	24"	109.5	101.7	94.9	89.0	96.2	90.1	84.8	80.0	85.8	80.9	76.6	72.7	110.0	110.0	110.0	110.0	110.0	110.0	110.0	104.4	110.0	105.6	100.0	94.9
126"	96"	30"	105.9	98.2	91.6	85.8	93.1	87.1	81.8	77.2	83.0	78.2	74.0	70.1	110.0	110.0	106.4	99.1	110.0	102.4	95.7	89.8	98.7	92.5	86.9	82.0
132"	96"	36"	102.4	94.9	88.4	82.8	90.1	84.3	79.1	74.6	80.5	75.7	71.6	67.8	105.6	97.5	90.5	84.4	93.2	86.8	81.3	76.4	83.4	78.3	73.7	69.7
138"	96"	42"	90.5	83.7	77.8	72.7	79.8	74.4	69.8	65.6	71.3	67.0	63.2	59.8	90.5	83.7	77.8	72.7	79.8	74.4	69.8	65.6	71.3	67.0	63.2	59.8
144"	96"	48"	78.4	72.5	67.5	63.1	69.0	64.4	60.4	56.9	61.6	58.0	54.7	51.8	78.4	72.5	67.5	63.1	69.0	64.4	60.4	56.9	61.6	58.0	54.7	51.8
120"	108"	12"	105.5	98.2	91.9	86.3	92.5	86.8	81.8	77.4	82.3	77.8	73.8	70.1	110.0	110.0	110.0	110.0	110.0	110.0	106.9	101.0	107.5	101.6	96.3	91.6
126"	108"	18"	102.1	94.9	88.7	83.3	89.6	84.0	79.1	74.8	79.8	75.3	71.4	67.8	110.0	110.0	110.0	106.2	110.0	109.7	103.3	96.8	104.2	98.4	93.2	88.5
132"	108"	24"	98.9	91.9	85.8	80.5	86.8	81.4	76.6	72.3	77.4	73.0	69.1	65.6	110.0	104.4	96.5	89.6	101.0	93.5	87.0	81.4	90.7	84.6	79.3	74.6
138"	108"	30"	95.9	88.8	82.2	76.5	84.3	78.9	74.0	-	75.1	70.8	-	-	96.5	88.8	82.2	76.5	85.4	79.3	74.0	-	76.6	71.6	-	-
144"	108"	36"	82.7	76.3	70.7	65.9	73.1	68.0	63.6	-	65.4	61.3	-	-	82.7	76.3	70.7	65.9	73.1	68.0	63.6	-	65.4	61.3	-	-
132"	120"	12"	95.6	89.0	83.3	78.2	83.8	78.7	74.2	70.1	74.6	70.5	66.9	63.6	110.0	110.0	104.6	96.6	109.4	102.7	95.0	88.4	97.3	92.0	87.0	81.4
138"	120"	18"	92.8	86.3	80.7	75.7	81.4	76.4	71.9	-	72.5	68.5	-	-	104.9	95.8	88.2	81.7	93.3	86.1	79.9	-	84.1	78.1	-	-
144"	120"	24"	89.0	81.6	75.2	69.8	79.0	73.1	68.0	-	70.5	66.2	-	-	89.0	81.6	75.2	69.8	79.0	73.1	68.0	-	71.0	66.2	-	-

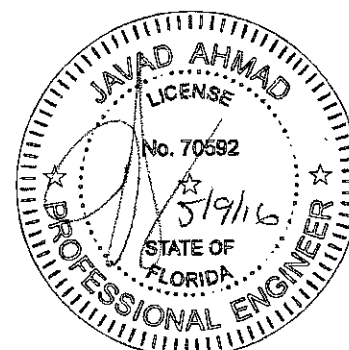
LIMIT EXTERIOR LOADS TO +100 PSF FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED.
SEE CHART ABOVE FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED.



TOTAL PROPERTIES
Ix = 14.183 IN⁴
Sx = 4.728 IN³



PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **16-0523.01**
Expiration Date **10/05/2021**
By *[Signature]*
Miami-Dade Product Control



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL: (305) 264-8100 FAX: (305) 262-6978

SERIES '450' ALUMINUM CLIPPED TUBE MULLION

CGI Windows and Doors, Inc.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL: (305) 593-6590 FAX: (305) 593-6592

revisions:

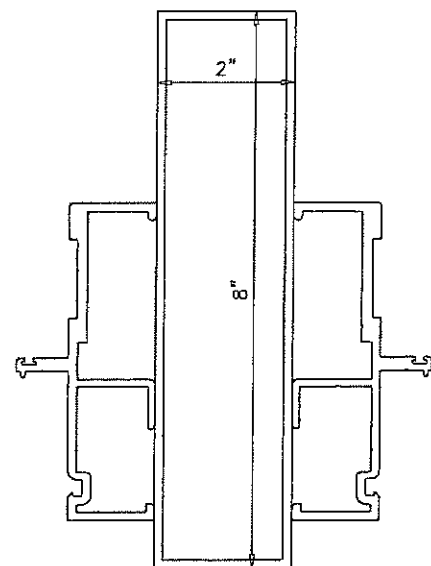
no	date	by	description
E	08.18.11		GENERAL REVISION
F	09.22.11		REV. PER BNC COMMENTS
G	10.06.14		UPDATED TO 2014 FBC
H	05.19.16		EDITORIAL CHANGES

date: 04-23-98
scale: -
dr. by: HAMID
chk. by:

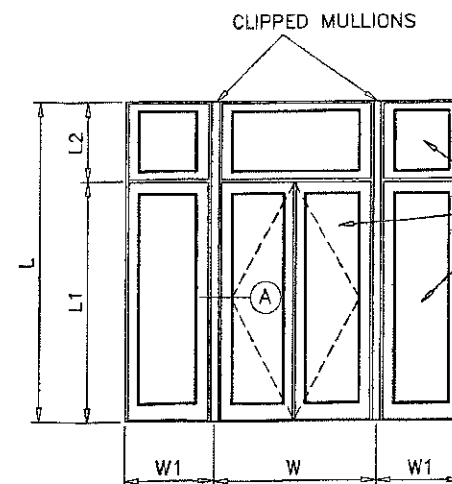
drawing no.
M98-02
sheet 2 of 5

DESIGN LOAD CAPACITY - PSF (2 X 8 X 1/8")																											
OPENING DIMENSIONS			1/4" DIA. ULTRACON												5/16" DIA. ULTRACON												
			DOOR WIDTH (W) = 60"				DOOR WIDTH (W) = 72"				DOOR WIDTH (W) = 84"				DOOR WIDTH (W) = 60"				DOOR WIDTH (W) = 72"				DOOR WIDTH (W) = 84"				
			SIDELITE WIDTHS (W1)				SIDELITE WIDTHS (W1)				SIDELITE WIDTHS (W1)				SIDELITE WIDTHS (W1)				SIDELITE WIDTHS (W1)				SIDELITE WIDTHS (W1)				
L	L1	L2	24"	30"	36"	42"	24"	30"	36"	42"	24"	30"	36"	42"	24"	30"	36"	42"	24"	30"	36"	42"	24"	30"	36"	42"	
96"	84"	12"	110.0	110.0	110.0	108.7	110.0	109.5	103.2	97.5	103.9	98.2	93.1	88.4	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
102"	84"	18"	110.0	110.0	110.0	103.9	110.0	105.1	98.9	93.4	99.9	94.3	89.3	84.8	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	
108"	84"	24"	110.0	110.0	106.3	99.6	107.9	101.0	94.9	89.6	96.2	90.7	85.8	81.4	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	106.2	
114"	84"	30"	110.0	109.5	102.1	95.6	103.9	97.2	91.3	86.0	92.8	87.4	82.6	78.2	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	107.8	102.2
120"	84"	36"	110.0	105.5	98.2	91.9	100.3	93.7	87.9	82.8	89.6	84.3	79.6	75.3	110.0	110.0	110.0	110.0	110.0	110.0	110.0	108.1	110.0	110.0	103.9	98.4	
126"	84"	42"	110.0	101.7	94.6	88.4	96.9	90.4	84.8	79.8	86.6	81.4	76.8	72.7	110.0	110.0	110.0	110.0	110.0	110.0	110.0	104.2	110.0	106.2	100.2	94.9	
132"	84"	48"	106.3	98.2	91.3	85.3	93.7	87.4	81.8	77.0	83.8	78.7	74.2	70.1	110.0	110.0	110.0	110.0	110.0	110.0	106.9	100.5	109.4	102.7	96.8	91.6	
138"	84"	54"	102.8	94.9	88.2	82.3	90.7	84.5	79.1	74.4	81.1	76.1	71.7	67.8	110.0	110.0	110.0	107.5	110.0	109.0	103.0	97.1	103.0	97.6	92.7	88.3	
144"	84"	60"	99.6	91.9	85.3	79.6	87.9	81.8	76.6	71.9	78.7	73.8	69.5	65.6	110.0	110.0	104.3	98.1	104.3	98.1	92.7	87.8	92.7	87.8	83.4	79.5	
108"	96"	12"	110.0	109.5	102.4	96.2	103.2	96.9	91.3	86.3	91.9	86.8	82.3	78.2	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	107.5	102.2	
114"	96"	18"	110.0	105.5	98.5	92.5	99.6	93.4	87.9	83.0	88.7	83.8	79.3	75.3	110.0	110.0	110.0	110.0	110.0	110.0	110.0	108.4	110.0	109.4	103.6	98.4	
120"	96"	24"	109.5	101.7	94.9	89.0	96.2	90.1	84.8	80.0	85.8	80.9	76.6	72.7	110.0	110.0	110.0	110.0	110.0	110.0	110.0	104.4	110.0	105.6	100.0	94.9	
126"	96"	30"	105.9	98.2	91.6	85.8	93.1	87.1	81.8	77.2	83.0	78.2	74.0	70.1	110.0	110.0	110.0	110.0	110.0	110.0	106.9	100.8	108.4	102.2	96.6	91.6	
132"	96"	36"	102.4	94.9	88.4	82.8	90.1	84.3	79.1	74.6	80.5	75.7	71.6	67.8	110.0	110.0	110.0	108.1	110.0	110.0	103.3	97.3	105.0	98.9	93.4	88.5	
138"	96"	42"	99.2	91.9	85.5	80.0	87.4	81.6	76.6	72.1	78.0	73.4	69.3	65.6	110.0	110.0	110.0	104.4	110.0	106.5	100.0	94.1	101.9	95.8	90.5	85.7	
144"	96"	48"	96.2	89.0	82.8	77.4	84.8	79.1	74.2	69.8	75.7	71.2	67.2	63.6	110.0	110.0	108.1	101.0	110.0	103.3	96.8	91.1	98.9	93.0	87.7	83.0	
120"	108"	12"	105.5	98.2	91.9	86.3	92.5	86.8	81.8	77.4	82.3	77.8	73.8	70.1	110.0	110.0	110.0	110.0	110.0	110.0	106.9	101.0	107.5	101.6	96.3	91.6	
126"	108"	18"	102.1	94.9	88.7	83.3	89.6	84.0	79.1	74.8	79.8	75.3	71.4	67.8	110.0	110.0	110.0	108.7	110.0	109.7	103.3	97.6	104.2	98.4	93.2	88.5	
132"	108"	24"	98.9	91.9	85.8	80.5	86.8	81.4	76.6	72.3	77.4	73.0	69.1	65.6	110.0	110.0	110.0	105.0	110.0	106.2	100.0	94.4	101.0	95.3	90.3	85.7	
138"	108"	30"	95.9	89.0	83.0	77.8	84.3	78.9	74.2	—	75.1	70.8	—	—	110.0	110.0	108.4	101.6	110.0	103.0	96.8	—	98.1	92.5	—	—	
144"	108"	36"	93.1	86.3	80.5	75.3	81.8	76.6	71.9	—	73.0	68.8	—	—	110.0	110.0	105.0	98.4	106.9	100.0	93.9	—	95.3	89.8	—	—	
132"	120"	12"	95.6	89.0	83.3	78.2	83.8	78.7	74.2	70.1	74.6	70.5	66.9	63.6	110.0	110.0	108.7	102.2	109.4	102.7	96.8	91.6	97.3	92.0	87.3	83.0	
138"	120"	18"	92.8	86.3	80.7	75.7	81.4	76.4	71.9	—	72.5	68.5	—	—	110.0	110.0	105.3	98.9	106.2	99.7	93.9	—	94.6	89.4	—	—	
144"	120"	24"	90.1	83.8	78.2	73.4	79.1	74.2	69.8	—	70.5	66.5	—	—	110.0	109.4	102.2	95.8	103.3	96.8	91.1	—	92.0	86.9	—	—	

LIMIT EXTERIOR LOADS TO +100 PSF FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS REQUIRED.
SEE CHART ABOVE FOR INSTALLATIONS WHERE WATER INFILTRATION RESISTANCE IS NOT REQUIRED.



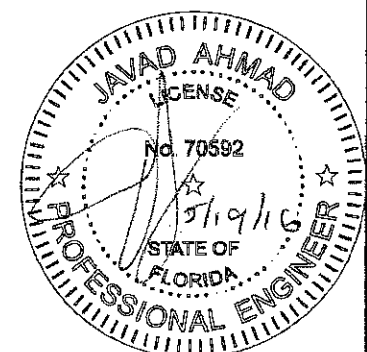
TOTAL PROPERTIES
Ix = 23.357 IN⁴
Sx = 5.839 IN³



REFER TO SEPARATE 'CGI' N.O.A.
FOR SERIES 450 DOORS, SIDELITES
AND TRANSOMS

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 16-0523.01
Expiration Date 10/05/2021

By *[Signature]*
Miami-Date Product Control



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL (305) 264-8100 FAX (305) 262-6978

SERIES '450' ALUMINUM CLIPPED TUBE MULLION

CGI Windows and Doors, Inc.
10100 N.W. 25TH STREET
MIAMI, FL. 33172
TEL (305) 593-6590 FAX (305) 593-6592

revisions:

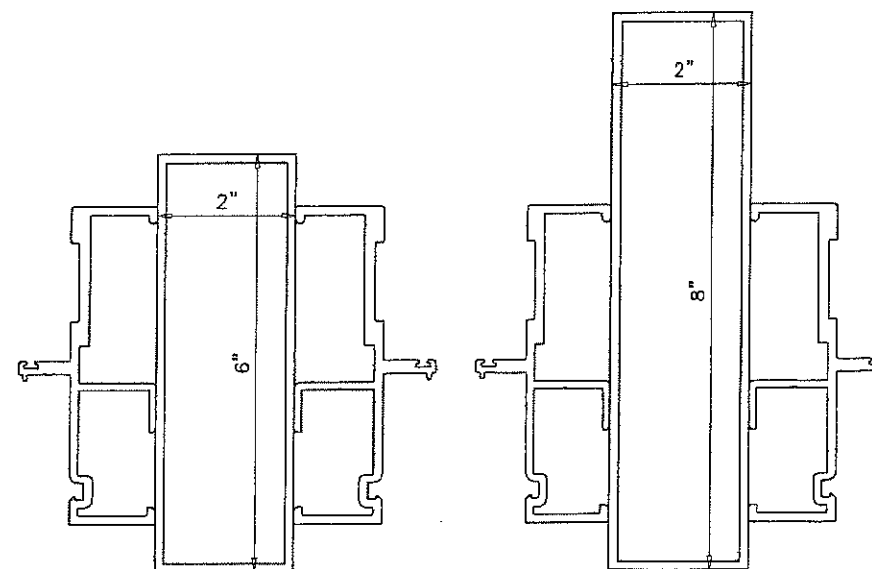
no	date	by	description
E	08.18.11		GENERAL REVISION
F	09.22.11		REV. PER BNC COMMENTS
G	10.06.14		UPDATED TO 2014 FBC
H	05.19.16		EDITORIAL CHANGES

date: 04-23-98
scale: -
dr. by: HAMID
chk. by:

drawing no.
M98-02
sheet 3 of 5

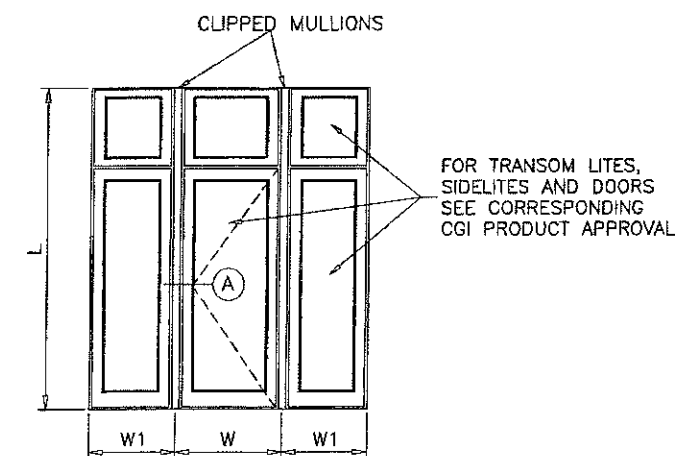
DESIGN LOAD CAPACITY - PSF					
L IN.	AVG. WIDTH IN.	2 X 6 X 1/8"		2 X 8 X 1/8"	
		1/4" DIA. ULTRACON	5/16" DIA. ULTRACON	1/4" DIA. ULTRACON	5/16" DIA. ULTRACON
84	24	110.0	110.0	110.0	110.0
	30	110.0	110.0	110.0	110.0
	36	110.0	110.0	110.0	110.0
	42	110.0	110.0	110.0	110.0
	48	110.0	110.0	110.0	110.0
	54	110.0	110.0	110.0	110.0
	60	101.7	110.0	101.7	110.0
	66	92.5	110.0	92.5	110.0
	72	84.8	110.0	84.8	110.0
	78	78.2	102.2	78.2	102.2
	84	72.7	94.9	72.7	94.9
96	24	110.0	110.0	110.0	110.0
	30	110.0	110.0	110.0	110.0
	36	110.0	110.0	110.0	110.0
	42	110.0	110.0	110.0	110.0
	48	110.0	110.0	110.0	110.0
	54	98.9	110.0	98.9	110.0
	60	89.0	110.0	89.0	110.0
	66	80.9	105.6	80.9	105.6
	72	74.2	96.8	74.2	96.8
	78	68.5	89.4	68.5	89.4
	84	63.6	83.0	63.6	83.0
108	24	110.0	110.0	110.0	110.0
	30	110.0	110.0	110.0	110.0
	36	110.0	110.0	110.0	110.0
	42	110.0	110.0	110.0	110.0
	48	98.9	110.0	98.9	110.0
	54	87.9	110.0	87.9	110.0
	60	79.1	103.3	79.1	103.3
	66	71.9	93.9	71.9	93.9
	72	65.9	86.1	65.9	86.1
	78	60.9	79.5	60.9	79.5
120	24	110.0	110.0	110.0	110.0
	30	110.0	110.0	110.0	110.0
	36	110.0	110.0	110.0	110.0
	42	101.7	110.0	101.7	110.0
	48	89.0	105.1	89.0	110.0
	54	79.1	93.4	79.1	103.3
	60	71.2	84.0	71.2	93.0
	66	64.7	76.4	64.7	84.5
	72	59.3	70.0	59.3	77.5

DESIGN LOAD CAPACITY - PSF					
L IN.	AVG. WIDTH IN.	2 X 6 X 1/8"		2 X 8 X 1/8"	
		1/4" DIA. ULTRACON	5/16" DIA. ULTRACON	1/4" DIA. ULTRACON	5/16" DIA. ULTRACON
132	24	110.0	110.0	110.0	110.0
	30	110.0	110.0	110.0	110.0
	36	105.2	105.2	107.9	110.0
	42	90.2	90.2	92.5	110.0
	48	78.9	78.9	80.9	105.6
	54	70.2	70.2	71.9	93.9
	60	63.1	63.1	64.7	84.5
144	24	110.0	110.0	110.0	110.0
	30	97.3	97.3	110.0	110.0
	36	81.1	81.1	98.9	110.0
	42	69.5	69.5	84.8	110.0
	48	60.8	60.8	74.2	96.8
	54	54.0	54.0	65.9	86.1
	60	48.6	48.6	59.3	77.5

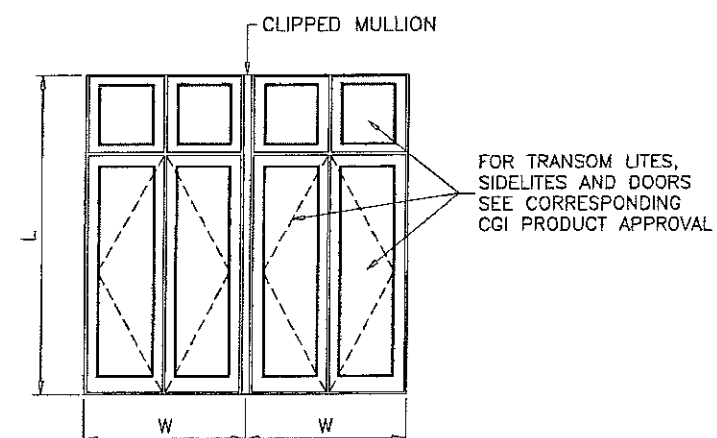


TOTAL PROPERTIES
Ix = 14.183 IN⁴
Sx = 4.728 IN³

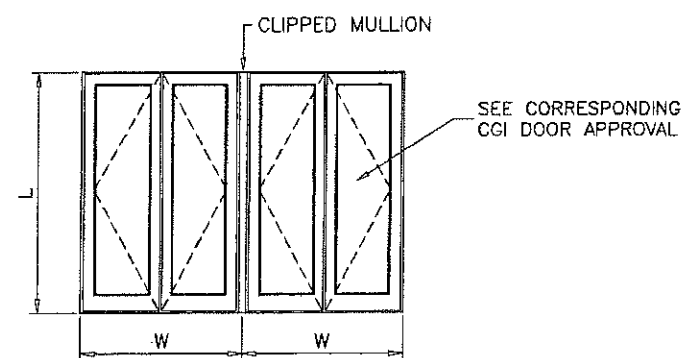
TOTAL PROPERTIES
Ix = 23.357 IN⁴
Sx = 5.839 IN³



$$\text{AVG. WIDTH} = \frac{W + W1}{2}$$



$$\text{AVG. WIDTH} = W$$

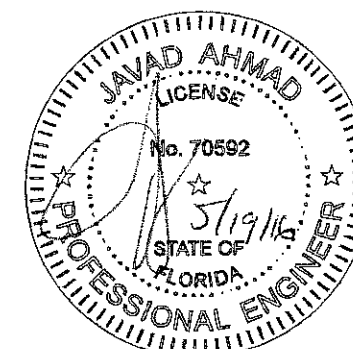



$$\text{AVG. WIDTH} = \frac{W}{2}$$

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 16-0523.01

Expiration Date 10/05/2021

By
Miami-Dade Product Control



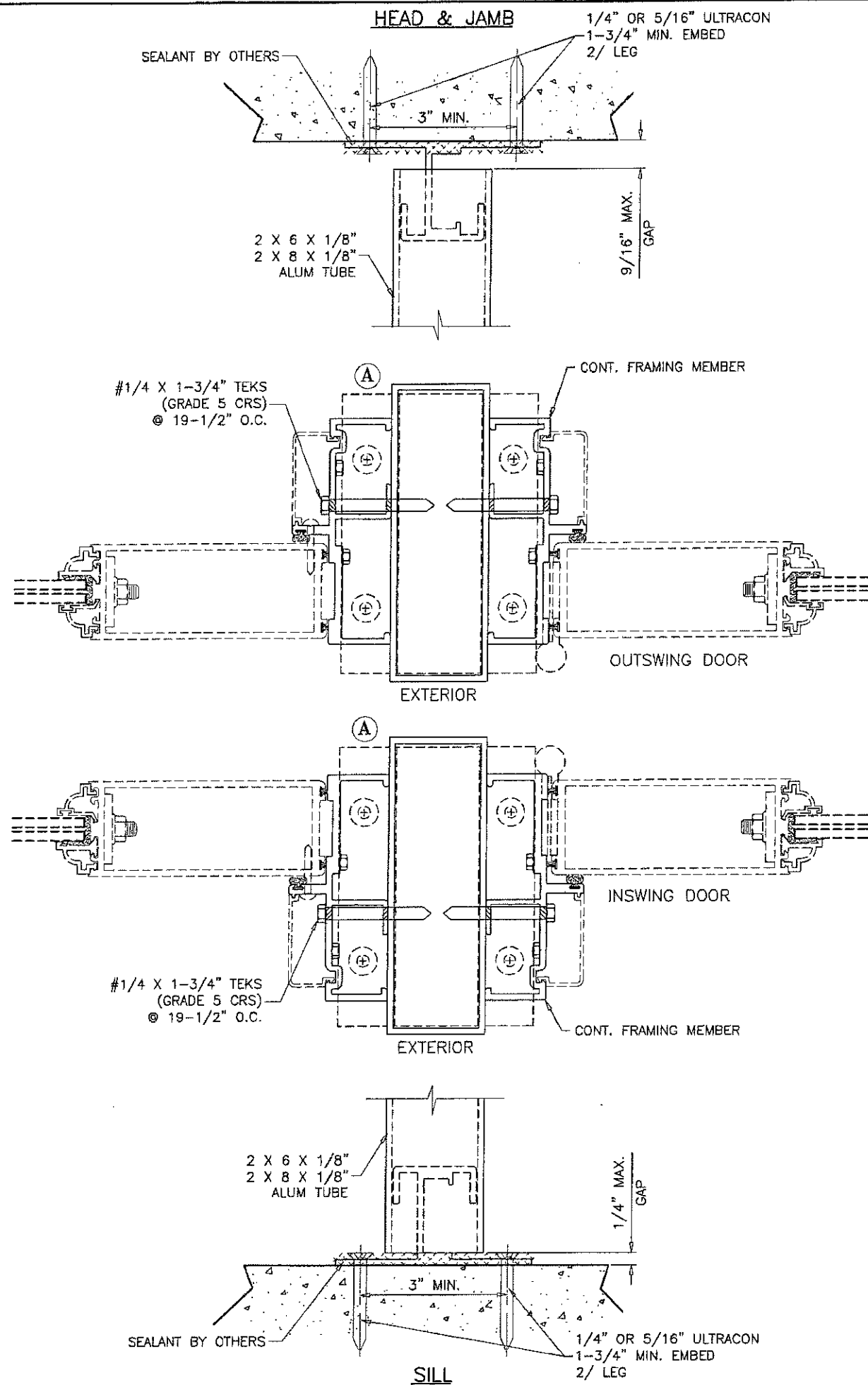


AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 9360 SUNSET DRIVE, SUITE 220
 MIAMI, FLORIDA 33173 (C.A.N. 3538)
 TEL (305) 264-8100 FAX (305) 262-6978

SERIES '450' ALUMINUM CLIPPED TUBE MULLION
CGI Windows and Doors, Inc.
 10100 N.W. 25TH STREET
 MIAMI, FL. 33172
 TEL (305) 593-6590 FAX (305) 593-6592

no	date	by	description
D	07.09.09		UPDATED FOR 2007 FBC
E	08.18.11		GENERAL REVISION
F	09.22.11		REV. PER BNC COMMENTS
G	10.06.14		UPDATED TO 2014 FBC
H	05.19.16		EDITORIAL CHANGES

date: 04-23-98	scale: -	dr. by: HAMID	ch. by:
drawing no. M98-02			
sheet 4 of 5			

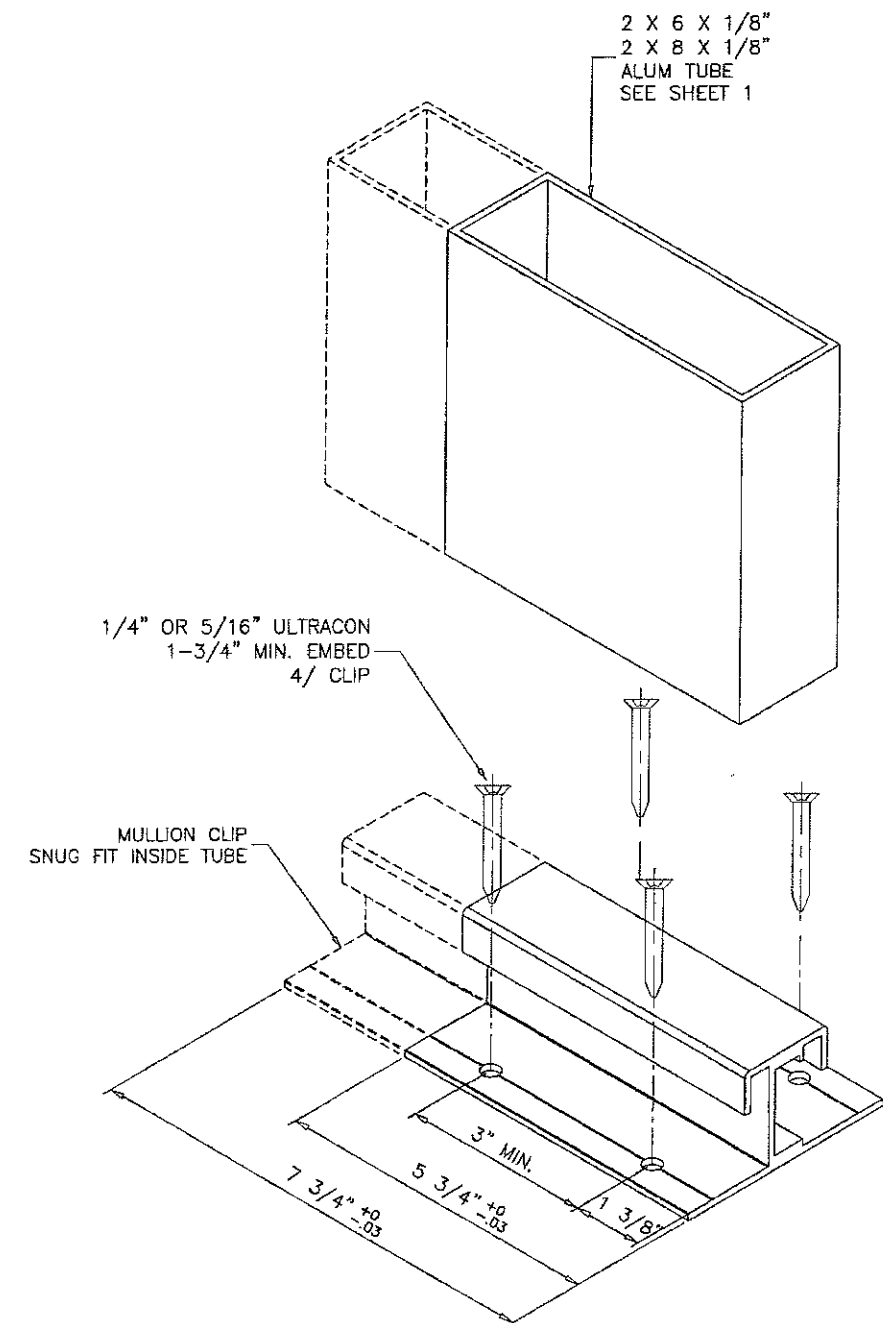


NOTES:

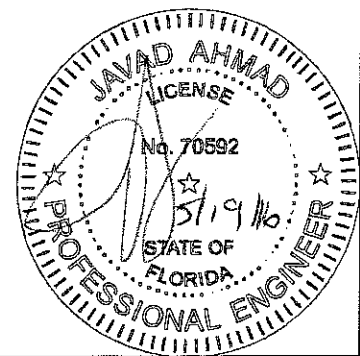
1/4" DIA. ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)
2-1/2" MIN. EDGE DISTANCE

5/16" DIA. ULTRACON BY 'ELCO' (Fu=177 KSI, Fy=155 KSI)
3-1/4" MIN. EDGE DISTANCE

CONCRETE f'c = 3000 PSI MIN.



PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 16-0523.01
Expiration Date 10/05/2021
By Miami-Dade Product Control



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9360 SUNSET DRIVE, SUITE 220
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H	05.19.16		EDITORIAL CHANGES

date: 04-23-98
scale: 3/8" = 1"
dr. by: HAMID
chk. by:

drawing no.
M98-02
sheet 5 of 5